REMARKS

The Applicants thank the Examiner for the careful examination of this application and respectfully requests the entry of the amendments indicated hereinabove.

Claims 1-20 and 28-29 are pending and rejected. Claims 6 and 13 are canceled, while Claims 1-5, 7-8, 14-16 and 28 are amended hereinabove.

In accordance with the request contained in the Office Action (page 2), the Election of Claims 1-20 and 28-29 is affirmed.

The Applicants respectfully traverse the objection to the Specification. The Applicants submit that the phrase "this would require $2.B_u$ input/output pins" is proper (note the use of the same symbols in the cited Wilhelm patent, such as the equation defining z just below Table 7 on page 6, also in line 37 on page 7).

In addition, the Applicants respectfully traverse the assertion in the Office Action (page 2) that the Declaration is defective. The Applicants submit that the Declaration does specify the application number, country, day, month and year of filing of the foreign application on which priority is claimed. Moreover, the Applicants submit that the Declaration was executed in accordance with 37 C.F.R.

§1.63 (a)(1). A copy of the Declaration is attached (a copy is also located in the

Private PAIR database). Clarification of the defect(s) is respectfully requested.

Amended independent Claim 1 positively recites one of the active signals
is provided as a current of a first sense and the other active signal as a current of
a second sense, the first and second sense being opposite to each other. These
advantageously claimed features are not taught or suggested by the patent
granted to Wilhelm.

The Applicants use of a single flow of current to generate three voltage
levels that define the data symbol is fundamentally excluded by Wilhelm's
structure. Specifically, Wilhelm teaches a CML-type differential switching system
(FIGS. 2-5) while the Applicants claim a LVDS-type signaling system. As a
result, the number of bits carried by the Wilhelm system is $log_2(N_i!)$ (page 1 line
30) but the number of bits carried by the Applicants system is $log_2(N_i(N_i-1))$. The
Applicants submit that in Wilhelm the "inactive" signal is at level 0 while the two
"active" signals are at levels 1 and 2; instead of the inactive signal providing
"voltage unit 1" and the active signals providing "voltage units 0 and 2" as stated
throughout the Office Action on pages 5-7 and 9.

The Applicants respectfully traverse the statement in the Office Action
(page 9) that the "use of a current signal versus a voltage signal is a design

choice-and does not change the functionality of the claims." The Applicants is functional submit that the use of a single flow of current to generate the three different voltage levels used to define the data symbol is indeed important to the functionality of the claims. Wilhelm does not teach, and the Wilhelm system is not capable of, providing the advantageously claimed one pull-up current and one pull-down current. Moreover, the Office Action does not cite any authoritative source for its statement that the "use of a current signal versus a voltage signal is a design choice [that] does not change the functionalities of the claims" or the statement that "at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a current signal instead of a voltage signal source" for a complementary driver structure.

Therefore, the Applicant respectfully asserts that Claim 1 is patentable over the patent granted to Wilhelm. Furthermore, Claims 2-5, 7, and 29 are allowable for depending on allowable independent Claim 1 and, in combination, including limitations not taught or described in the references of record.

Amended independent Claim 8 positively recites the encoder also being arranged to provide one of the active signals as a current of a first sense and the other active signal as a current of a second sense, the first and second senses being opposite to one another. These advantageously claimed features are not taught or suggested by the patent granted to Wilhelm.

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The Applicants use of a single flow of current to generate three voltage levels that define the data symbol is fundamentally excluded by Wilhelm's structure. Specifically, Wilhelm teaches a CML-type differential switching system (FIGS. 2-5) while the Applicants claim a LVDS-type signaling system. As a result, the number of bits carried by the Wilhelm system is $log_2(N_i!)$ (page 1 line 30) but the number of bits carried by the Applicants system is $log_2(N_i(N_r-1))$. The Applicants submit that in Wilhelm the "inactive" signal is at level 0 while the two "active" signals are at levels 1 and 2; instead of the inactive signal providing "voltage unit 1" and the active signals providing "voltage units 0 and 2" as stated throughout the Office Action on pages 5-7 and 9.

The Applicants respectfully traverse the statement in the Office Action (page 10) that the "use of a current signal versus a voltage signal is a design choice and does not change the functionality of the claims." The Applicants submit that the use of a single flow of current to generate the three different voltage levels used to define the data symbol is indeed important to the functionality of the claims. Wilhelm does not teach, and the Wilhelm system is not capable of, providing the advantageously claimed one pull-up current and one pull-down current. Moreover, the Office Action does not cite any authoritative source for its statement that the "use of a current signal versus a voltage signal is a design choice [that] does not change the functionalities of the
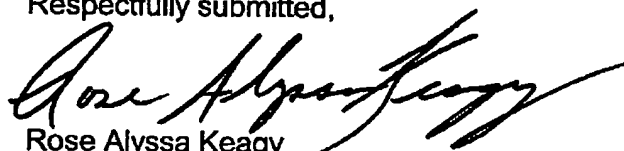
claims" or the statement that "at the time the invention was made, it would have

been obvious to a person of ordinary skill in the art to use a current signal

instead of a voltage signal source" for a complementary driver structure.

Therefore, the Applicant respectfully asserts that Claim 8 is patentable

over the patent granted to Wilhelm. Furthermore, Claims 9-12 and 14-20 are

allowable for depending on allowable independent Claim 8 and, in combination,

including limitations not taught or described in the references of record.

Amended independent Claim 28 positively recites the encoder also being

arranged to provide one of the active signals as a current of a first sense and the

other active signal as a current of a second sense, the first and second senses

being opposite to one another. These advantageously claimed features are not

taught or suggested by the patent granted to Wilhelm. Therefore, the Applicant

respectfully asserts that Claim 28 is patentable over the patent granted to

Wilhelm.

For the reasons stated above, this application is believed to be in condition

for allowance. Reexamination and reconsideration is requested.

Respectfully submitted,

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